DEPARTMENT OF NATIONAL DEFENCE
CANADA

OPERATIONAL RESEARCH DIVISION

DIRECTORATE OF OPERATIONAL RESEARCH (JOINT & LAND)

ORD PROJECT REPORT PR 2000/10

POL-MIL GAMING AT THE 1999 CDS SINGLE ISSUE SEMINAR

BY

DR SCOT ROBERTSON

MAY 2000

OTTAWA, CANADA

National Defence Défense nationale

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ABSTRACT

The Director of Defence Analysis (DDA) was approached by the Chief of Staff Strategic Planning (COS Strat P) of the Director General Strategic Planning (DGSP) Division to develop a strategic level game for the 1999 Chief of Defence Staff (CDS) Single Issue Seminar. This report documents the development and execution of the game, discusses some initial impressions and concludes with some preliminary discussion on the potential value of such strategic level gaming to inform future force development within the Canadian Forces.

RESUME

Le Chef d'état-major - Planification stratégique (CEMPS) du Directeur général - Planification stratégique (DGPS) a approché le Directeur - Analyse de défense (DA) pour concevoir un jeu de niveau stratégique en vue du séminaire ponctuel de 1999 que présentera le Chef d'état-major de la Défense (CEMD). Le présent rapport documente le déroulement et l'exécution du jeu, examine certaines impressions initiales et conclut avec une discussion préliminaire de la valeur potentielle d'un tel jeu de niveau stratégique comme moyen de bien planifier l'évolution des troupes au sein des Forces canadiennes.

EXECUTIVE SUMMARY

The Director of Defence Analysis (DDA) was approached by the Chief of Staff Strategic Planning (COS Strat P) of the Director General Strategic Planning (DGSP) Division to develop a strategic level game for the 1999 Chief of Defence Staff (CDS) Single Issue Seminar. This report documents the development and execution of the game, discusses some initial impressions and concludes with some preliminary discussion on the potential value of such strategic level gaming to inform future force development within the Canadian Forces.

In designing the seminar game, the intent was to provide an opportunity to think about the future on a number of planes. The last few years have been difficult, and have been largely pre-occupied with internal matters. Against this backdrop, the underlying challenge has been to consider:

- the implications of the rapid and extensive changes in the global security environment
- how to change / alter the CF to meet the changing environment in terms of
  - technology
  - doctrine
  - organization

In essence, the ultimate question is how to ensure the long term "health" of the CF over time?

Determining the outcome expected or anticipated from game play was somewhat difficult. However, the key was to engage in a capability identification exercise. This would assist in furthering the STRATEGY 2020 initiative, ultimately leading to the identification of follow-on five-year targets for STRATEGY 2020. Besides familiarizing the participants with the nature of Strategy 2020 force structure themes and their inherent strengths and limitations, it was intended to take the results of the syndicate findings and begin to identify issues that could/should be considered in subsequent iterations of the Strategy 2020 process. In framing the game, it was necessary to devise a number of generic issues that would be addressed. These are enumerated below:

Force Projection. Examine force projection concepts and capabilities to enable strategic manoeuvre of the 2020 force model.

Force Sustainment. Examine sustainment considerations for the 2020 force.

Force Employment. Explore capabilities and concepts for the employment of the 2020 model in warfighting and for stability and support operations both abroad and at home. This will likely include discussions of the balance between offence and defence, and the balance between close and extended range operations.

Complex Areas of Operations. Examine employment of the 2020 force in complex terrain and areas of operations.

Reserves. Consider roles for the reserves in the 2020 model and how to integrate these.

Homeland Defence. Examine 2020 capabilities in domestic defence operations against asymmetric threats and Weapons of Mass Destruction.

Interdependence with OGDs. Examine the essential partnerships with OGDs as well as with other public and private organizations.

Coalition Interoperability. Examine the interoperability challenges posed by alliance and coalition operations.

In view of the numerous and diverse issues that arose, it was obviously not possible to develop any degree of consensus on the implications these held for the Strategy 2020 process. Nor was it possible to consider in any meaningful way the relative importance or urgency attached to any particular issue or insight that arose during the game. To begin to conduct meaningful and in-depth analysis would require a coherent approach to the longer-term perspective of the Strategy 2020 process. If implemented, this type of systemic approach would allow for a regular cycle of research, analysis and experimentation with some of the key issues necessary to make progress in achieving the objectives of Strategy 2020.

As a methodology for engaging senior leadership in a highly abstract undertaking, POL-MIL gaming seemed to prove very worthwhile. It should be noted, however, that it was done in a compressed timeframe. Traditionally, POL-MIL games are conducted over a period of three to five days. The game portion of the CDS Seminar was carried out in a mere five hours. Hence it is not really possible to determine whether the methodology or the game were unqualified successes. By the same token, anecdotal evidence from participants suggests that the methodology showed promise as a vehicle for encouraging senior level engagement on highly abstract issues. Furthermore, anecdotal evidence also suggests that a gaming type environment is useful in encouraging more unconstrained thinking. If that is indeed the case, then it served its purpose and it would be well to consider adopting POL-MIL as one of the tools in the gaming tool-box for use by the CF and DND.

If this initial positive outcome is suggestive of a perceived need for the type analytical tool provided by POL-Mil gaming techniques, and if there is a sense that POL-MIL fills a void in the gaming hierarchy, it remains to determine how a more comprehensive POL-MIL capability could be created. Due to its inherent flexibility, POL-MIL gaming has a wide-range of possible applications. Based on this preliminary assessment, it would seem to be worthwhile considering how POL-MIL might be integrated in the analytical gaming hierarchy currently in place in DND and the CF.

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POL-MIL GAMING AT THE 1999 CDS SINGLE ISSUE SEMINAR

INTRODUCTION

1. The Director of Defence Analysis (DDA) was approached by the Chief of Staff Strategic Planning (COS Strat P) of the Director General Strategic Planning (DGSP) Division to develop a strategic level game for the 1999 Chief of Defence Staff (CDS) Single Issue Seminar. This report documents the development and execution of the game, discusses some initial impressions and concludes with some preliminary discussion on the potential value of such strategic level gaming to inform future force development within the Canadian Forces.

2. Discussions between DDA and COS Strat P staff were conducted to determine the aim of the seminar, and by extension, the type of game that would best support the exercise. After some deliberation, the overall aim was defined as a capability identification exercise in support of the STRATEGY 2020 initiative. As part of that, the desired outcome or expectation was the development of follow-on five-year targets for future force planning. After some preliminary research by DDA and DGOR staffs, it became evident that a POL-MIL game was probably the only means by which the aim could be accomplished in the time available. That determination, however, raised some unique problems, in that neither the Department of National Defence (DND) nor the CF has either recent or extensive experience with POL-MIL gaming.[1] Hence, it was necessary to explore first the fundamentals of POL-MIL gaming within the larger context of military and policy level gaming methods.

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1 Individuals and delegations from DND & the CF have participated in high-level wargames, such as the USN *Global Wargame*, US Army *Army After Next* and US Air Force *Global Engagement*. These *Title X* games as they are referred to, are very large-scale undertakings and are very complex. Canadian participation in these games has been both regular, and significant. However, it is fair to suggest that Canada's participation is more for the benefit of the game itself, than for building a collective experiential base that can be used for our own national purposes. This is not to say that participation has not been beneficial, merely that the Canadian role has been limited and the product or outcome somewhat ad hoc. Participation in other more focussed games, such as the USN *Technology Initiatives Game*, which are "blue-sky" in nature, has been very beneficial.

GAMING AT THE STRATEGIC LEVEL

3. Military gaming has been, and is used, in any number of ways. Within the myriad of ways in which gaming has been employed some have been designed to assist in developing, exploring, and testing policies, strategies, hypotheses, and other ideas, and as a vehicle for helping understand complex policy issues. Given the sometimes ethereal nature of strategic level problems and issues, the use of gaming can be, and often is, quite controversial. Despite the ongoing debate over the utility of strategic level gaming techniques, it has served as an important tool in developing strategy, in pre-testing policies before actual implementation, and in communicating understanding of operational complexities.

EXPECTATIONS

4. Unlike many other analytical techniques or methodologies, strategic-level gaming is not a solution method. The output is not a forecast, prediction, solution, or rigorous validation. Rather, the output is increased understanding. Most often, strategic-level gaming keys in on one or more of the following:

- look for and reveal errors or omissions in concept;
- explore assumptions and uncover the implicit ones;
- draw out divided opinion;
- examine the feasibility of an operational concept;
- identify areas that are particularly sensitive;
- suggest questions or hypotheses for further study;
- identify the values or measures of effectiveness (MOE);
- test strategies for long-term consequences.

5. As a methodology, strategic-level gaming is able to address in a comprehensive and coherent fashion a wider range of issues than is possible by individual analysis alone. At root, strategic-level gaming aims at generating understanding and in some cases revealing misunderstanding around a particular issue. Gaming can often respond to changing operational or strategic contexts more rapidly than other methods. Consequently, strategic level gaming should be seen as the first step towards a more comprehensive and rigorous approach to confronting new and complex issues.

POL-MIL GAMING

6. With these background considerations in mind, the next step is to situate POL-MIL within the larger context of strategic gaming. POL-MIL is, even as its most ardent advocates acknowledge, an imprecise and inexact undertaking. The United States Army's Center for Army Analysis (CAA) is probably the most frequent user of this methodology. To some extent, the CAA could be considered, if not the founder of POL-MIL, then at least its most enthusiastic exponent. They have, over the course of the last decade or so, refined the methodology and employed it widely and extensively.[2] In an overview of the methodology the CAA asserts that POL-MIL is perhaps best focused on questions or issues too broad in scope to be considered adequately by interactive wargaming. "Results from political-military gaming often provide the first step in high-resolution analysis by identifying assumptions for plausible scenarios, defining and prioritizing issues ... and clarifying policy development and decision making".[3] A fuller discussion of the methodology can be found at Annex B.

7. Based upon the stated requirement from COS Strat P staff, it appeared as though a variant of a POL-MIL game or workshop would be an appropriate methodology to employ. The next section of this report provides a detailed discussion of some of the considerations that drove the decision to employ a POL-MIL approach, as well as some of the more specific considerations that affected the design of the game itself.

THE 1999 CDS SEMINAR GAME

8. In designing the seminar game, the intent was to provide an opportunity to think about the future on a number of planes. This was something of a departure, in that the last few years have been largely pre-occupied with internal process-type matters. Against this backdrop, the underlying and to some extent overlooked challenge has been to consider:

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2 As of August 1999, USA CAA had conducted 103 POL-MIL games and workshops. Briefing by E.B. Vandiver III, Director, CAA to the CA-US Operations Research Symposium, Fort Belvoir VA., 24 Aug 1999.

3 This description of the methodology appears in each CAA report on the results of a POL-MIL game. See for instance *Bold Strokes 95 – Joint ROK-US Regional Arms Control Study (JKRACS)*, , (Bethesda, Maryland: USA CAA, Memorandum Report CAA-MR-95-10, June 1995)

- the implications of the rapid and extensive changes in the global security environment

- how to change / alter the CF to meet the changing environment in terms of
  - technology
  - doctrine, and
  - organization

In essence, the ultimate question is how to ensure the long term "health" of the CF over time?

9. Confronting these challenges is an exceedingly difficult and daunting task, even in the best of circumstances. It requires thinking about an unpredictable future environment; new and vague concepts; and new and emerging technologies. In attempting to engage in this type of forward-looking activity, the most difficult aspect is the prospect of letting go some of the things that we know well and are comfortable with. There is risk attached to this, in that *getting it wrong* can lead to catastrophic failure. However, there is an equal and perhaps even greater risk in not confronting the future at all. If we choose to do nothing, we will grow less and less capable of addressing future challenges.

Game Design & Play

10. The overall goal of the CDS Seminar for autumn 1999 was two-fold. First, it was to ensure that the essence of Strategy 2020 was fully understood throughout the breadth and depth of the General Officer Corps. Secondly, it was to begin to develop an appreciation for the nature and extent of the work required to build on Strategy 2020 and to institutionalize it throughout the CF.

11. Strategy 2020 is a first step in beginning to address many of these challenges. However, it is but a first step. More work is necessary to build on the foundation laid by Strategy 2020 and begin to address the future more comprehensively. The seminar game was to be an effort, albeit very much abbreviated, at trying to identify and wrestle with the future. The Game would endeavour to "test" a range of possible force structure(s) against a set of future scenarios. Each scenario was deliberately conceived to be plausible. The three scenario variations covered the spectrum of possible future conflict.

One suggested a "warfighting" situation. A second called for an Operation Other than War (OOTW), while the third demanded a response to an emerging international humanitarian emergency that spawned a domestic operations situation.

Aim

12. The explicit aim of the CDS Seminar Game was to generate and explore issues associated with future warfare and military operations other than war that could affect longer-term force structure requirements. The underlying intent was to elicit issues during the course of play that could provide a rich set of study questions for further analysis.

Means

13. A high-level (strategic) seminar wargame was employed to test the 2020 force structure. It was be a POL-MIL exercise that would rely upon the judgement of the participants. It necessarily focused at the strategic level, and deliberately sought to avoid tactical level issues.

Expected Outcome

14. Determining the outcome expected or anticipated from game play was somewhat difficult. However, the key was to engage in a capability identification exercise. This would assist in furthering the STRATEGY 2020 initiative, ultimately leading to the identification of follow-on five-year targets for STRATEGY 2020. Besides familiarizing the participants with the nature of Strategy 2020 force structure themes and their inherent strengths and limitations, it was intended to take the results of the syndicate findings and begin to identify issues that could/should be considered in subsequent iterations of the Strategy 2020 process. In framing the game, it was necessary to devise a number of generic issues that would be addressed. These are enumerated below:

a. **Force Projection**. Examine force projection concepts and capabilities to enable strategic manoeuvre of the 2020 force model.

b. **Force Sustainment**. Examine sustainment considerations for the 2020 force.

c. **Force Employment**. Explore capabilities and concepts for the employment of the 2020 model in warfighting and for stability and support operations both abroad and at home. This will likely include discussions of the balance between offence and defence, and the balance between close and extended range operations.

d. **Complex Areas of Operations**. Examine employment of the 2020 force in complex terrain and areas of operations.

e. **Reserves.** Consider roles for the reserves in the 2020 model and how to integrate these.

f. **Homeland Defence**. Examine 2020 capabilities in domestic defence operations against asymmetric threats and Weapons of Mass Destruction.

g. **Interdependence with OGDs**. Examine the essential partnerships with OGDs as well as with other public and private organizations.

h. **Coalition Interoperability**. Examine the interoperability challenges posed by alliance and coalition operations.

Game Play

15. The game was conducted in a tabletop, seminar fashion. To the extent possible, it followed a free play format, even though a free play game carries with it some inherent risks. For example, in free-play exercises at this level of abstraction, it is often the case that some players may wish to avoid war and resort instead to diplomatic or other measures, precluding the generation and examination of issues associated with future operations. For this reason a *Road to War* was devised that produced the conditions for war, or for OOTW. The scenario(s) under examination emerged from this *Road to War* so that operations were imminent at the start of the game.

16. Given the time available (4 to 5 hours) there was no active RED (enemy) or ORANGE (neutral) agents in the game. Syndicates were given an "opposing" situation and RED force, against which BLUE (Canada) would operate. There were, however, individuals who represented RED Higher Headquarters and GREEN (coalition partners) agents who injected "problems" into the play.

17. Again, the time available for the game made it virtually impossible to see the game through to completion. All that was possible was an initial move or round, and in some instances a second move. The first move sought to elicit judgements about the military capabilities that would be necessary in the operational scenario. The second move was designed to "throw a curve" in an effort to force considerations about other capabilities that may be required and to identify issues for future consideration.

Game Inputs[4]

18. The following materials made up the game package issued to the players:

- State of the World (History of the Future)
- Road to War (Foundation Scenario)
- Red Situation and Threat Forces
- Scenario Variations
- Allied/Coalition Command Structure
- Allied/Coalition Forces
- Deployment Time Lines
- CF Start State (limitations of the availability of forces due to ongoing operational deployments)

Syndicate Deliberations

19. In approaching the problem, syndicates were asked to consider some or all of the following:

- the ability of the overall CF force structure to generate numerically sufficient forces to meet the mission objectives

- the ability of the overall CF force structure to generate qualitatively sufficient forces to meet the mission objectives

- the ability of the overall CF force structure to project the force in time to meet the mission objectives

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4 These are reproduced at Annex C.

- specific tasks associated with accomplishing the mission. (In addition to ground, air, and naval operations, include considerations for:
    - Special Operations (including CIMIC/PSYOP);
    - space support;
    - Information Operations;
    - Intelligence, Surveillance & Reconnaissance;
    - force protection, including NBC;
    - support,
    - deployment, to include intra-theatre; and
    - Sustainment.

GAME RESULTS

20. Given the subjective nature of the game, and the reliance on the judgement of the players, it is difficult to synthesize the Key Issues and Key Insights that arose during the game. The discussion below attempts to capture in a generic fashion, some of the major issues and insights. It is by no means exhaustive. Moreover, what is clearly absent is a sense of any priority between and across issues. While this would have been the desired outcome of the exercise, the time allotted precluded any effort at establishing priorities. It should also be noted that the terminology employed is not necessarily that of the players. Rather, exercise staff(s) developed the categories and allocated the Key Insights and Key Issues that emerged during the course of the game using subjective judgement and analysis.

Future Force Development Issues Catalogue

21. What follows is a catalogue of some of the significant issues that will confront the Canadian Forces in the future. The list is by no means exhaustive. Also, the terminology may be the source of some potential confusion. Such confusion, however, cannot be avoided. It is an endeavour to characterize capability in terms that apply regardless of the operating environment. It also is an effort to acknowledge the increasingly "joint imperative" that armed forces will confront in the future.

Force Projection

22. The CF will, for the foreseeable future, be required to maintain the ability to project force abroad to meet a range of possible obligations. In contemplating this, there are some familiar connotations as well as some new and only vaguely understood implications.

23. The familiar connotations relate mostly to readiness levels and lift considerations. Readiness levels are a constant question, and are constantly reviewed and revised. Recently, the question of rapid deployability has also come to the fore. Lift issues, therefore, have taken on increased importance, as there is a sense that force must be projected rapidly in order to restore or impose order in a conflict or OOTW situation.

24. Against the classic notion of force projection, are some new and potentially significant considerations. Most of these pertain to new notions of force design. Some of these are due to the emergence of new technologies that carry organizational and doctrinal implications. Others stem from a growing trend towards seeking alternate means of providing military support functions. Still others arise from changes to possible allied and coalition structures. Some of these notions or developments are described below:

a. **Force Projection with Minimal Presence.** Driven by a combination of budgetary, technological and structural factors, the notion of force projection with minimal presence warrants some consideration. The basic idea is to shift thinking and emphasis from physical presence to greater emphasis on the production of a desired effect. Some of the developments that are driving this are enhanced ISR capabilities coupled with longer-range physical and virtual (IO) effects. If achieved, the CF would have a greater strategic reach, more emphasis on pre-emption and less reliance on physical deployment of forces and logistic support.

b. **Force Projection from Remote (Extended Range) Platforms.** Another development is the notion of force projection from remote platforms at extended ranges. In this regard, the underlying objective is to achieve a desired effect from longer-range, hence minimizing the risk to CF personnel.

c. **Force Projection Through Unconventional Effects.** Seeking to accomplish a desired end through the use of unconventional effects is another area of development that warrants consideration. Given that future conflicts may, in some instances, be fundamentally different from the classic force on force model that predominated during the Industrial era, armed forces may require unconventional means. In this regard, the objective is to enable targeting of points of vulnerability outside the traditional direct target set. There are several aspects to this. One is Special Operations forces. Another is the pursuit of means to apply effects against political, economic, technical, psychological and social vulnerabilities. The means to apply unconventional effects range from PSYOPs, through Information Operations to the use of innovative technologies. In the latter case, this can range from non-lethal technologies, existing technologies applied differently, to high-tech systems such as cyber-weapons and nano-technology.

25. When considering innovative means of force projection, there are several complicating factors. Many of these pertain to interoperability with our principal potential allies. *Strategy 2020* identified interoperability as a major factor for the CF. In the event that some of our major allies pursue new or alternative means of force projection, many based on the application of new and emerging technology, it could become increasingly difficult for the CF to achieve the requisite degree of interoperability. This issue will need to be addressed in a fundamental and thorough way.

- reduced logistics footprint & tail
- "focussed" logistics
- force projection with minimal presence
- force projection from extended range
- Integrated Force Concept (embedding standing CF tactical units into existing multinational or bi-national units)
- inter-operability considerations

26. **Force Sustainment.** As with notions of force projection, force sustainment will have to be considered. For budgetary reasons alone, the "iron mountain" is no longer an option. The unpredictability of the future security environment often means that deployments will be unanticipated, both in time and in locale. Hence, the option of a slow build-up of the necessary sustainment base will not be available. Rather, the CF

will need to be nimble and rapidly deployable. To achieve this will require new concepts of sustainment. Many of these are already being contemplated, and in some cases implemented. The following list is suggestive of some of the concepts under consideration:

- reduced logistics footprint & tail
- reachback
- contractor support & commercialized logistics support
- deployable support bases
- anticipatory & focussed logistics
- self-sustaining forces
- mobilization issues
- "tiered" forces

27. **Force Employment**. Notions of force employment may also be subject to significant change in the future. This change will come from a number of directions. For instance, the means of "packaging" and employing military forces may change, or the utility of military force may need to be re-thought.

28. In the first case, that of the means of "packaging" and employing force, there are several notions or issues that will confront the CF in the years ahead. Some of these are enumerated below:

- importance of "joint" concepts of operations
- importance of "joint" capabilities in a combined context
- sea-based denial (land & air & space)
- land-based denial (sea & air & space)
- air-based denial (sea & land & space)
- utility of multi-role platforms
- application of force from extended range
- effect on local C2 concepts and systems
- remote targeting

29. There are also Force Employment issues that arise from questioning the fundamental utility of military force. Throughout the West there is a reduced tolerance for casualties of any kind: military or civilian, friend or foe. This reluctance is often expressed in tight rules of engagement, particularly in OOTW/PSO/PKO. If this trend is

more than a transitory phenomenon, and becomes an "iron law", then armed forces will need to confront these challenges head on. Some of these are:

- the requisite mix of presence capability and enforcement capability
- developing personnel as adept at "diplomacy" as at war-fighting
- force protection to prevent BLUE casualties
- precision systems to minimize collateral casualties and damage

30. Another issue is the appropriate balance between quality and quantity. Some operations will call for high quality, technologically sophisticated warfighting skills and capabilities. Other operations will require high-quality personnel and capabilities for OOTW/presence operations. Still others may simply call for large numbers. This has been a constant problem for armed forces, and not one that is easily resolved.

31. **Complex Areas of Operations**. One of the hallmarks of the future security environment will be the trend towards complex areas of operations. These will confront armed forces with many difficulties, whether they are engaged in OOTW/PSO/PKO on the one hand, or warfighting on the other. In some cases, this will be a simple product of demographic trends. Urbanisation means that military operations of whatever form will be conducted around or even in urban environments. Urban operations call for different capabilities than do manoeuvre/strike operations. The presence of non-combatants complicates planning and execution.

32. If the trend towards intra-state conflict continues, this will also confront armed forces with a complex operating environment. Again, there will be a mix of combatants and non-combatants. This will be compounded by the difficulty in distinguishing between the parties in an intra-state conflict.

33. Solutions to these issues will require significant thought. There is no single approach that will address the problem of complex areas of operations. Technology may offer some solutions through increased precision or through non-lethal weapons. However, when confronting a complex operating environment, technology is not a panacea, particularly in non-warfighting operations.

34. **Reserves.** Another question or issue area that will require serious discussion and attention is the role of reserve forces. While the reserves have been the object of much study, and not a little debate it remains to be seen what this has accomplished. The

fundamental issues have not been resolved. In that regard, there is still some discussion over the following:

- individual augmentation versus formed units
- potential roles of formed units
- tiered force concept
- mobilization
- timelines
- training levels

35. Underlying the extensive discussions of these and associated issues lies the more fundamental point, namely the meaning and future of Total Force. To date, the notion of Total Force has remained largely that – a notion. It has not developed much of substance, for the simple reason that the future form of the CF remains unclear. Resolution will be required on some basic questions such as what capabilities will be best lodged in the Regular Force, and what capabilities will best be lodged in the Reserve Force. Until such time as there is more clarity on this, the Regular Force - Reserve Force issue will remain something of a Gordian Knot.

36. **Homeland Defence.** Homeland Defence is an area of emerging importance, although for the time being, it remains only vaguely understood. Hence, developing responses becomes quite problematic. Potential threats to Canadian territory could arise from a number of sources. Some of these could mirror those of the past, but for there would likely be considerable strategic warning of any re-manifestation of threats of the nature posed during the Cold War.

37. What will undoubtedly be of greater concern will be the emergence of asymmetric threats. There is, as yet, no all-encompassing sense of the extent and scope of the asymmetric challenge. Nor is there necessarily a common definition or understanding of the term. By and large, an asymmetric challenge would seek to bypass or circumvent defences to attack the sources of national will and power. Asymmetric threats would likely target soft points, by any number of means. Most would likely take the form of attacks on civilian and/or governmental and/or military infrastructure.

38. In considering the nature and extent to which armed forces are able to contribute to homeland or national defence against asymmetric threats, the following points need to be addressed:

- range of capabilities
- NBC mitigation
- consequence management
- relationship with OGDs & emergency measures organizations
- Information infrastructure protection
- counter-terrorism
- intelligence
- response capabilities
- relationship with US for continental homeland defence

39. **Interdependence with OGDs**. The future sources and nature of conflict will call for some re-thinking of the relationships between defence establishments and other government departments and non-governmental organizations. In part, the requirement to reconsider this complex of relationships derives from the changing sources of conflict. Given the rapid pace of change that presently characterizes the security environment, and will in all likelihood continue to characterize it in the future, there is a need to be able to respond rapidly to forestall or mitigate threats to systemic stability. Armed forces will need to be more nimble in developing appropriate response packages. Some of the major considerations in this regard are:

- impact on national decision-making
- compressing or blurring of traditional strategic – operational – tactical continuum
- potential effect of asymmetric operations on national security apparatus
- homeland defence / infrastructure defence
- counter-terrorism

40. In addition to the requirement for nimble and rapid response, the changing nature of conflict could call up more tailored and focused response packages. Issues such as the blurring of the lines between war and OOTW, and the complexity of operations will mean that armed forces may need to develop a wider range of capabilities. Some of the major considerations are:

- pace of future operations
- blurring of lines between war and OOTW
- complexity of future operations (war & OOTW & Domestic Ops)

- increasing transparency of future operations
- media presence
- involvement of multiple agencies
- presence of multi-lateral bodies (UN, etc)
- presence of private and public voluntary agencies (aid, humanitarian relief, etc.)

41. **Coalition Interoperability**. A final issue that will demand considerable attention in the future is the question of coalition interoperability. This is a complex and multi-faceted problem area. Some of the more obvious and pressing aspects of this are:

- C4ISR capabilities at strategic, operational & tactical levels
- impact of having tiered forces within a coalition
- effect of hybrid force on interoperability
- layered interoperability
- Integrated Force Concept
- what is critical in terms of interoperability
- common operating picture
- Battle Management competency
- pace of operations
- requirement for speed

CONCLUSIONS

42. In view of the numerous and diverse issues that arose, it was obviously not possible to develop any degree of consensus on the implications these held for the Strategy 2020 process. Nor was it possible to consider in any meaningful way the relative importance or urgency attached to any particular issue or insight that arose during the game. To begin to conduct meaningful and in-depth analysis would require a coherent longer-term perspective and approach to the larger Strategy 2020 process. Figure 1 below portrays a notional framework within which Strategy 2020 could be set, and links it to a programme of analysis and experimentation that could support it over time. If implemented, this systematic approach would allow for a regular cycle of research, analysis and experimentation with some of the key issues necessary to make progress in achieving the objectives of Strategy 2020.

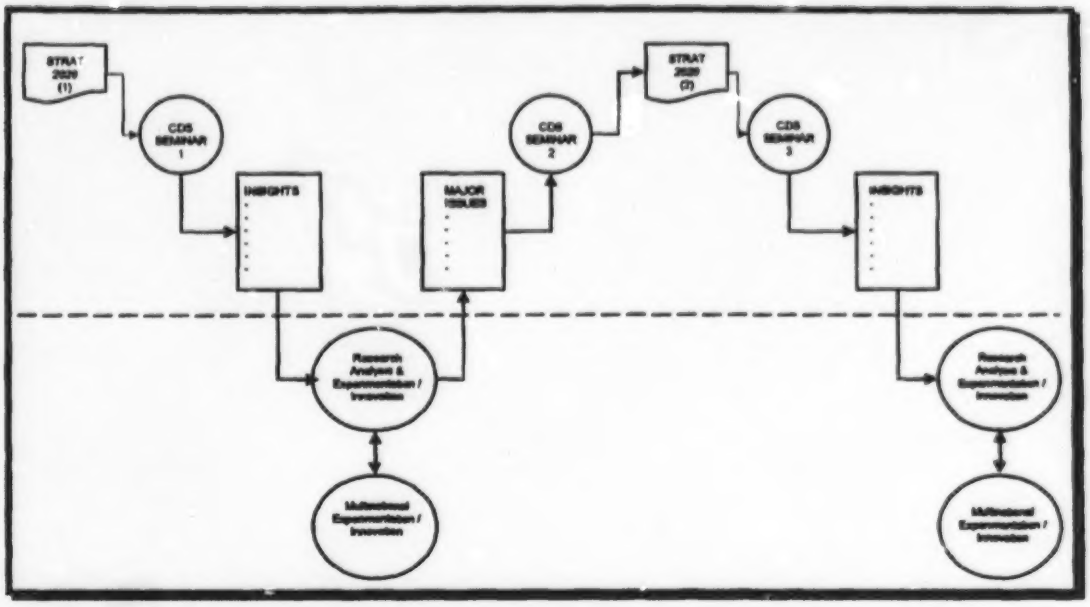

Figure 1: Notional Framework for Extending Strategy 2020

RECOMMENDATIONS

43. As a methodology for engaging senior leadership in a highly abstract undertaking, POL-MIL gaming seemed to prove very worthwhile. It should be noted, however, that it was done in a compressed timeframe. Traditionally, POL-MIL games are conducted over a period of three to five days. The game portion of the CDS Seminar was carried out in a mere five hours. Hence it is not really possible to determine whether the methodology or the game were unqualified successes. By the same token, anecdotal evidence from participants suggests that the methodology showed promise as a vehicle for encouraging senior level engagement on highly abstract issues. Furthermore, anecdotal evidence also suggests that a gaming type environment is useful in encouraging more unconstrained thinking. If that is indeed the case, then it served its purpose and it would be well to consider adopting POL-MIL as one of the tools in the gaming tool-box for use by the CF and DND.

44. If this initial positive outcome is suggestive of a perceived need for the type of analytical tool provided by POL-Mil gaming techniques, and if there is a sense that POL-MIL fills a void in the gaming hierarchy, it remains to determine how a more comprehensive POL-MIL capability could be created. Due to its inherent flexibility,

POL-MIL gaming has a wide-range of possible applications. Based on this preliminary assessment, it would seem to be worthwhile considering how POL-MIL might be integrated in the analytical gaming hierarchy currently in place in DND and the CF.[5]

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5 A thorough overview of the challenges facing the wargaming community in the US defence establishment can be found in Roger T. Culkin, Maj USAF, *Post-Cold War Wargaming and the American Military Leadership Challenge*(AU/ACSC/032/1999-04), (Maxwell AL.: USAF ACSC, March 1999.) While Culkin's study addresses the use of wargames as an explicit educational tool, many of the concerns are also applicable to wargames as a research/futures tool.

ANNEX A
ORD PROJECT REPORT PR 2000/10
MAY 2000

STRATEGIC LEVEL GAMING IN DND/CF

1. Strategic level gaming is not something that either DND or the CF has much recent experience with. For that reason, some background discussion is necessary to set out what strategic-level gaming is, how it is conducted, and what can be expected from it. Strategic level games are NOT intended to produce concrete results, or to confirm existing structures, programmes or designs. Rather, they are to identify issues for subsequent exploration and detailed follow-on analysis. Hence, the game for the CDS Seminar was intended to test the STRATEGY 2020 outline against a possible future scenario. That in itself, however, posed some obstacles and challenges. First, the future cannot be known, either in the orientation of the international system, or in the types of combat systems that will be available or may be in service. In addition, future defence budgets cannot be anticipated.

2. While these are indeed formidable challenges, they are not insuperable, particularly if we keep the fundamental objective in perspective. Some sense of perspective can be gained, at least partially, by looking to previous historical experience with such gaming endeavours. The inter-war period (1919-1939) is a particularly rich and fruitful one in attempting to gain a sense of the potential value of what is commonly referred to as strategic gaming. In the United States, for instance, the US Navy and the US Army, as well as the Army Air Corps undertook a wide range of high level games in an effort to gain an appreciation, not only of the nature of warfare, but also what might be possible in terms of new systems, organizations and doctrines. Some examples are set out in the table below:

SERVICE	FOCUS OF GAMING
US Navy	carrier aviation Pacific campaign
US Army	War Plan ORANGE role of aviation
Army Air Corps	strategic bombing air superiority close air support

In each of these initiatives, high-level strategic gaming was employed to identify and illuminate issues that military establishments felt could condition the conduct of future wars. Subsequently, ideas and issues were subjected to more detailed scrutiny and analysis before decisions to embark upon new initiatives were taken.

ANNEX B
ORD PROJECT REPORT PR 2000/10
MAY 2000

POLITICAL-MILITARY GAMING METHODOLOGY

Overview

1. The following is a general discussion of US Army Center for Army Analysis (CAA) political-military gaming methodology. This approach is easily tailored to support specific games and issues workshops conducted by CAA's Conflict Analysis Center (CAC).

2. Political-military games are conducted by CAA to assist US Army major commands, Army components of the US Unified Commands, and the Army Staff. Political-military games are developed in direct coordination with the sponsor to explore policy issues and military options. These games focus on questions involving the application of national power in the resolution of issues too broad in scope to be considered adequately by interactive wargaming. Results from political-military gaming often provide the first step in high resolution analysis by identifying assumptions for plausible scenarios, defining and prioritizing issues based on the commander's intent, and clarifying policy development and decision making.

3. State-of-the-art political-military games are a principal methodology used by CAA. Experts apply their professional experience by responding to specific issues within the dynamic environment of a scenario. A scenario provides a well defined structure and context for issue analysis. Games are usually 2 days and consist of a series of moves managed by controllers who synthesize expert opinions with sponsor requirements, ensure adequacy of issue treatment, and prepare insights from the game. Key insights are refined immediately and presented personally to the sponsor for further comment and refinement.

Political-Military Game Structure

4. The CAC has developed an iterative structure to assure successful political-military games that has three sequential phases: preprocessing, gaming, and post-processing as shown in Figure 1. During the preprocessing phase candidate issues are identified. Then, based on these candidate issues, a realistic scenario, which emphasizes the criticality of decisions concerning the issues, is developed. The gamers are then organized into teams to provide alternative perspectives of the key real-world elements that would actually impact the issues. The roles of the gamers and the demands placed upon them are closely interrelated. Finally, the teams are charged with responsibilities and demands which force them to address the issues in a disciplined manner.

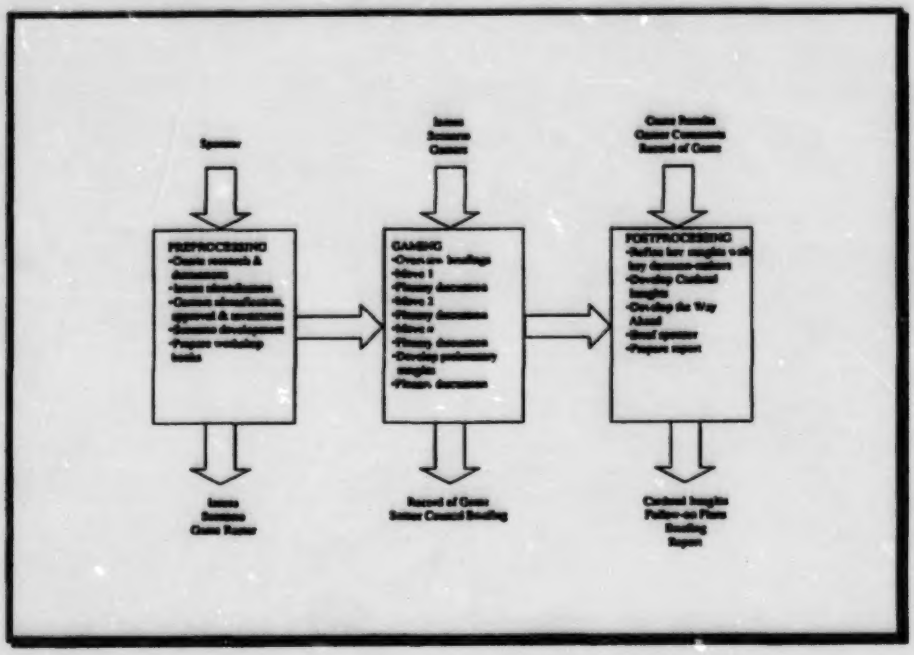

Figure B-1: CAA's Pol-Mil Gaming Process

Pre-processing

5. Pre-processing takes the conventional form of a discussion that yields concept definition. Ideally, an Army component commander, a member of the Army's senior leadership, an Army Staff principal, or a noted expert initiates this process. The Center can, and has, initiated preprocessing prior to an organized dialogue with a game's sponsor

in order to determine if an issue merits further research and development. Bottom line is that the sponsor knows best what he needs to accomplish his mission, and the Center's objective is to assist. This assistance is best provided when the sponsor or his principal staff officer requests a political-military game. Sponsor requests initiate research. Whenever possible, this is conducted onsite at the sponsor's headquarters or staff agency.

Onsite Research and Discussions

6. There is no substitute for direct, onsite research and discussion with the commander and his principal staff. Continuous coordination is provided by a principal staff officer who also participates in each of the political-military games. This direct coordination facilitates subsequent planning trips with inprocess reviews with the sponsor through game report completion.

Issues Identification

7. An initial set of issues is generated by research during the concept definition stage of the game. The sponsor usually provides critical issues directly. Generally, issue generation is an iterativ process with final approval of the issues residing with the sponsor. Gamers are identified during the issues identification phase.

Game Design

8. Once issues are identified, the political-military game is tailored to explore each issue within the context of the sponsor's objectives. The game design consists of gamer selection and assignment, the scenario, moves, and the charges within each move.

Game Roster

9. Principal gamers and team leaders are identified by the sponsor during onsite research and issue identification.

Game Scenario

10. The scenario, which sets the context within which the participants must operate, is part of the critical foundation of the game and a key driver in focusing the participants on the issues from a common and relevant perspective. Accordingly, a significant amount of

effort is expended in the preprocessing phase in order to ensure that the scenario is as realistic as possible and provides information that is relevant to the issues to be examined. Frequently, the scenario describes a future situation in which the gamers are tasked to play specific functions. The demands which are placed upon the gamers in these situations force them to examine the issues.

Game Moves

11. The number of moves of the game is dictated by the scope, structure, and complexity of the problem posed by the sponsor, and the relationships among the issues that have been identified. Each move consists of a set of questions, called charges, to be answered by each team.

Gaming

12. Gamers are welcomed, introduced, and then briefed on the scenario before beginning the game.

Scenario Briefing

13. While gamers are familiar with various aspects of the subject area being gamed, they will not be familiar with the specific scenario developed for a particular game. Controllers are familiar with every aspect of the scenario, the issues being analyzed, and anticipated results. Usually, controllers have conducted a practice session with the Game Director.

Game Dynamics

14. After the scenario briefing and explanation of the issues, gamers are presented Move 1 for discussion and resolution. A move is initiated by the Chief Controller, and sustained by controllers and analysts assigned to each team. The issues for a move are presented as a "charge" to a team and consist of a series of questions designed to deal with the sponsor's approved issues. Teams respond to charges under the direction of team leaders and the guidance of controllers. Usually, 3 hours are adequate for total treatment of a move. Typically, teams meet separately during the moves. First, team members are provided written requirements for each move and asked to develop individual answers. Second, teams develop collective answers and responses to charges. Third, the team leader or a Center-provided briefer/recorder briefs the team's results in a

plenary session attended by the Game Director, all gamers, controllers, observers, and the sponsor. This presentation and discussion in plenary session signals the completion of a move, if the Chief Controller and Game Director concur.

Preliminary Insights

15. Preliminary insights are an important real-time product of the game. These insights are first identified in the team discussions of a particular move and then gain wider acceptance during the rigorous plenary discussions and Senior Council

Briefings

16. During this dialogue, controllers synthesize expert opinions with sponsor requirements to ensure adequacy of issue treatment, and then prepare preliminary insights. Insights remain preliminary until validated further by supporting analysis and post-processing.

Record of Proceedings

17. The CAC prepares a non-verbatim, not-for-attribution written record of proceedings in the form of a CAA memorandum report on all games. This report contains Key Insights from the game and provides the sponsor a complete accounting of all phases of the game.

Post-processing

18. Post-processing accelerates the exploitation phase of the gaming methodology. Key Insights are refined into Cardinal Insights during post-processing. Cardinal Insights are those with broadest range of application. This refinement begins with a briefing to the Senior Council and continues with executive decision-makers.

19. Three especially important products refined during this phase are a review and agreement on the game impact assessment, review of scenarios generated by the game, and consensus on the steps that should be taken next to maximize benefits of the game.

CDS ISSUES SEMINAR

(15-17 Oct 1999)

SEMINAR GAME

GAME BOOK

THIS MATERIAL HAS BEEN DEVELOPED FOR EXERCISE PURPOSES ONLY. IT IS NOT INTENDED TO PORTRAY AN ASSESSMENT OF A LIKELY SCENARIO, BUT RATHER ONE OF MANY POSSIBLE FUTURE SCENARIOS. THE PARTICULAR SET OF CIRCUMSTANCES WAS CHOSEN IN ORDER TO PROVIDE AN APPROPRIATE STORYBOARD AND VEHICLE TO CARRY THE SEMINAR THEME.

STATE OF THE WORLD--1995-2015[1]

OVERVIEW

1. The final years of the 20th Century and first two decades of the 21st Century saw the development of Russia and China as major competitors to Western military power, the re-emergence of both Iran and Iraq as threats to Western interests in the Persian Gulf, and a continuation of disparate regional conflicts. The most significant military engagement during the period was the Second Gulf War in 2010, where a coalition of Western & Gulf States again led by the US repelled Iran's attempt to gain control of oil-producing lands in Kuwait and Saudi Arabia. Conflict in the Balkans continued on a lesser scale under the watchful eye of NATO peace-keeping forces. The governments in Bosnia, Serbia, Croatia, and Macedonia remain only marginally stable. Significant tensions have developed between Russia and several of its neighbors, while China has sought to extend its influence in East Asia and the Pacific. Other specific events that shaped the world between 1995 and 2015 include:

- the peaceful unification of Korea in 2003;
- the admission of four East European states into NATO in 2003;
- the incorporation of Belarus into Russia in 2005;
- the India-Pakistan War in 2012;
- Chinese declarations of rights to expanded territorial waters since 2013; and
- Russian disagreements with the Baltic states in 2012-2014 and with Ukraine since 2014.

2. Three world-wide trends emerged during the last decade and a half: full transition to the Information Age (except in the "Third" world); a heightening of political instability and turmoil; and the formation of a multi-power world.

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1 This "History of the Future" is not intended to portray the most likely future, but rather one of many possible futures. This particular set of "facts and circumstances" was chosen in order to provide an appropriate storyboard for the Seminar Wargame. It was adapted from material developed for the US Army's, Army After Next (AAN) cycle in 1999.

Transition to the Information Age

3. The driving force of this move between millennia, the transition into the Information Age, led to the development of new technologies and major advances in military capabilities, as well as fostering disruption of social patterns in both developed and developing nations.

Political Instability and Turmoil

4. Turmoil and political instability continued to be problematic. The gap between the "have" and "have not" states has worsened. Those states transforming successfully to knowledge-based economies have experienced relatively stable or increasing prosperity; those failing to do so have remained impoverished or have discovered new depths of economic disorder. The "have not" nations have experienced increasing social discontent. Social elites and their less well-to-do followers have pressed for more rapid modernization and prosperity, while others have longed for the tranquillity of traditional society and traditional social norms. This tension has released nationalistic, tribal, religious, ecological, and ethnic passions that have endangered governments and left populations in chaos, lawlessness, and poverty. In Russia, heavy defence spending has brought economic hard times. Russian citizens see wide discrepancies between their economic and social well being and that of their neighbors in Poland, Ukraine, and the Baltics.

5. Other trends toward instability and turmoil that began to emerge in the 1990's accelerated greatly during the first two decades of the 21st Century. Throughout this period, Russia has been heavily engaged in "peacekeeping" operations in Chechnya and several other former Soviet republics. During the last decade, Russia has used these "peacekeeping" efforts as a means of attempting to regain lost territory. Elsewhere, the U.S. employed its forces unilaterally on several Peace Operations missions and as a part of UN or other multinational operations. In some cases, the UN has found itself the sole functioning administrative authority, as local administrations have been overwhelmed by a combination of natural disasters, medical crises and ethnic strife. Also discernible during this period, was a growing reluctance by several industrial nations to dedicate resources and expose their military personnel to these crisis situations. As a result, the UN's ability to provide relief and function as a *de facto* governmental administration in these regions has declined at the very time the demand for these functions has increased.

As a result, the U.S. and those allies who continued to be willing to allocate resources to these functions found their services to be in ever-greater demand.

6. **Conflict on Indian Sub-Continent**. On the Indian Sub-Continent, outbreaks of violence between Hindus and Muslims in South Asia became more frequent. This prompted saber-rattling by India, Pakistan, and Bangladesh, leading to a short but ultimately indecisive war in 2012.

7. **Turkish/Middle East Tensions**. Through a dedicated effort, Turkey settled the internal conflict with its Kurdish minority. Turkey agreed to recognize Kurdish culture and language in a special zone of Cultural Autonomy and supported the establishment of a semi-autonomous Kurdish region within northern Iraq. As a result of this support, the Kurdish Democratic Party cooperated with the Turkish army in controlling the Kurdish Workers Party (PKK). This cooperative agreement served to further heighten tensions between Turkey and Syria, which strongly supported the PKK, and between Turkey and Iraq, which viewed support for Kurdish autonomy within its own borders as an attack on its sovereignty.

8. **Islamic Fundamentalism**. The tenets of Islamic fundamentalism gained increasing credence in the Middle East and North Africa throughout the early 2000s. Algeria, Tunisia, and Libya brought radical Islamic governments to power. Morocco and Egypt concluded agreements with radical Islamic groups that share power in their governments. In the Middle East, Iran continued to have radical Islamic governments, while Iraq and Syria continue their nationalistic policies. Saudi Arabia, Jordan, and Oman are contending with serious challenges to their stability by radical groups. An Iranian radical Shi'ite sect, the Darwa Order of the Sharia (DOoS), has been openly coordinating domestic and international policy objectives among radical Islamic religious leaders in most North African and Middle Eastern countries. DOoS's proclamations have been strongly emphasizing the threat to Islam. The United States is especially scorned as being the "great Satan whose influence must be purged from the ever growing Islamic sphere of dominance."

9. **Terrorism and Influx of Refugees**. Both North America and Europe have suffered from escalating waves of terrorist attacks believed to be encouraged and supported, if not planned, by several North African and Middle Eastern radical or fundamentalist sources. The attacks were typically carried out by radical Islamic cells that benefit from DOoS funding. At the same time, record numbers of legal and illegal

immigrants from Southeast Asia, Central Asia, Africa, and Latin America are severely straining economic and political cohesion in Western Europe and North America.

10. **Nationalism.** Nationalism had become a major force for Western and Eastern European nations as leaders sought to explain economic problems during electoral cycles. The birth of democracy in former dictatorships made new leaders more sensitive to the wishes of their peoples and also led to efforts to settle age-old conflicts that involved resources or other valuable assets. Unless a leader could deliver improved standards of living and more consumer goods, nationalistic strategies were seen as the surest why to acquire or maintain power. Nowhere has this trend been more evident than in Russia. Nationalist fervor has resulted in several instances of internal violence in Russia. Poland has also become highly nationalistic. This was evidenced in its hostile relations with Russia over the former Belarus. Citizens in the western part of Belarus have been increasingly critical of their government's decision to become incorporated into Russia. Indeed, many of them feel more like Poles than Russians. Candidates in Polish elections have competed for the most anti-Belarus position. Some analysts have feared border incursions from the Poles.

11. **Arms Production & Sales.** Several states have sought to create world class development and production capabilities for conventional arms. Iran developed a capable aircraft and tank industrial base. Korea is building its own F-16 fighters, and Japan and Taiwan have pursued their own domestic fighter development programs. Brazil has produced and marketed a wide range of inexpensive ground combat weapons and missile systems. Other developing nations have focused their efforts on generating high technology industrial bases which had commercial as well as military uses.

12. **The Nuclear Powers and WMD.** As of 2014, there were five nations considered to be "nuclear weapons nations". They are the United States, Russia, the United Kingdom, France, and China, as codified in international law by the Nuclear Non-Proliferation Treaty (NPT) signed in 1970 and extended indefinitely in 1995. India and Pakistan possess nuclear weapons, but have not yet agreed to adopt the provisions of the NPT. In point of fact, several more nations, to include Israel, Iran, and Iraq have nuclear weapons but do not publicly admit to their possession and deployment. All of the Soviet successor states except Russia have destroyed their weapons or turned them over to Russia. South Africa has also dismantled or destroyed all of its nuclear weapons. Although a nuclear capability was being developed by the former North Korea, the new

unified Korea adopted a no nuclear weapons policy. Details on the treaties and nuclear arsenals of the nuclear countries, is provided separately.

Formation of a Multi-Polar World.

13. Although the U.S. remained the only true Superpower, major competitors formed and significant shifts in the balance between military powers occurred as 2015 approached. A relatively unified Europe developed economically and refined its military power. China has developed into a major military power. Japan, although remaining focused on economic growth, has begun significant developments in military capability. Russia, by heavily focusing its resources on the development of military capabilities, is a major competitor in Europe, parts of the Middle East, and Western Asia. Although not as powerful, both Iran and Iraq remain significant threats to U.S. interests in the Middle East.

SIGNIFICANT EVENTS: 1995-2015

14. Seeking to improve its "blue water" naval capabilities, China purchased nearly all of the former Black Sea Fleet from Russia and Ukraine between 1997 and 2000. In 2000, amid loud protests from both Russia and the West, Ukraine concluded the sale of a new aircraft carrier to China. Buoyed by the incorporation of Hong Kong and the economic prospects of the future, China declared an intent to invest heavily in its military, with the goal of parity with the U.S.

15. In 1998, Western national security specialists concluded that China was a growing regional and perhaps a global power. To counter this potential threat, Western strategists decided that Russia could not be weakened to a point where it could no longer be able to have a counter-balancing effect on China as a regional power.

16. Coincidentally, Russia initiated a program of military reform. The reform movement allowed sufficient reductions in force size, permitting an end to the highly unpopular draft. Russian military reformers emphasized mobility, long-range precision strike, and the use of technology. They began efforts to offset the reduction in force size with improvements in these areas. They also came to believe that future wars would not be frontal assaults across either the Central Plains or the Central Steppes. Rather, they concluded that the key to future economic power and regional security concerns was the ability to move and strike quickly.

17. Later that year, following the announcement of large oil reserves in the Spratly's, China renewed its efforts to enforce its territorial claims by asserting its "right" to control maritime traffic in the vicinity.

18. By the turn of the century, Islamic Fundamentalism had gained increased popularity in the Middle-East and North Africa. In 2000, Algeria, Tunisia, Libya, and Sudan installed radical governments and Morocco and Egypt concluded cooperative agreements. The Islamic Salvation Front took control of the Algerian government and was quickly recognized by Iran. The situation was compounded by former Soviet Republics' decisions to sell naval surface combatants and diesel submarines, aircraft, armored vehicles, and spare parts to Iraq and Syria. China, India, and some former Warsaw Pact countries continued to make and sell 1990 vintage military equipment and spare parts, with significant modifications and upgrades.

19. An Iranian radical group, the Darwa Order of the Sharia (DOoS) began to openly coordinate numerous acts of worldwide terrorism. By 2010, the DOoS' proclamations called for the elimination of borders between Islamic countries and continued to stress the threat to Islam from the West, particularly the USA. DOoS rhetoric included demands that the U.S. withdraw completely from the Gulf region.

20. Exceeding the expectations of even the most optimistic analyst, Ukraine economic advances put it on a course to become an "economic miracle." Rapid economic progress and claims of discrimination among the ethnic Russian population, combined with the historic Crimea issue, continued the deterioration in relations between Ukraine and Russia.

21. Syria continued to cautiously pursue peace with Israel. In 2001, a U.S. brokered deal put the last piece of the Middle East Peace Process into place when Syria and Israel initialed a peace accord. Its primary provisions were full return of the Golan Heights to Syria over a three year period, Syrian agreement to maintain the Golan as a demilitarized zone with an international observer force modelled on the Sinai Multinational Force and Observers (MFO), and full normalization of relations within five years. The key element which brought agreement of the parties was the participation of a U.S. Army force in the Golan MFO. Despite sometimes violent protests by Israeli settlers on the Golan, Israel had completed the withdrawal by January 2005.

22. In 2002, A U.S. armored battalion task force had joined the Golan MFO to oversee the implementation of the Syria-Israel Peace Accord. A year later, the U.S. intervened in Liberia in order to restore its democratic government. These operations were typical of U.S. involvement in Peace Operations during the twenty years between 1995 and 2015.

23. In 2002, despite protests from Moscow, Slovenia, the Slovak Republic, and Romania were admitted to NATO. All of the provisions of the NATO treaty remained unchanged.

24. In February, 2003, North Korea finally collapsed, leading to the unification of the Peninsula.

25. By mutual agreement of their respective governments, Belarus was incorporated into Russia as an autonomous republic in 2005. There was and remains, however, considerable opposition within Belarus.

26. Late in the 20th Century, China began reorganizing and expanding the People's Liberation Army (PLA), and re-equipping its high-mobility Field Army. By 2006, China had moved to a new stage of PLA modernization, with another Field Army enlarged and re-equipped, and the air forces having procured 640 modern fighter aircraft over a four year period. New model TBMs and ICBMs expanded and modernized the missile force. Although Chinese military capabilities fell short of either the U.S. or Russia, they had become a major competitor in the region by 2020.

27. Throughout the first part of the 21st Century, Russia continued its attempts to dominate the Republics of Georgia, Armenia, and Azerbaijan, while Uzbekistan, Tajikistan, and Turkmenistan continued to be plagued by political unrest fostered by Islamic Fundamentalists. However, in 2007, oil rich and isolated Kazakhstan concluded an agreement with China to use the soon to be completed oil and gas pipeline from Xinjiang Province to the port of Yantai to move more of its products to the world market.

28. By 2008, Russian and U.S. strategic nuclear weapons reached the START III limits of 2000-2500 operational warheads. U.S. intelligence estimated that China's nuclear expansion would level off at about 1500 strategic warheads by 2015.

29. By 2009, the Russian military had completed an extensive reform that made the Armed Forces much smaller and more capable of being developed into a highly technical professional force.

30. In 2010, Iran attempted to eliminate U.S. influence in the Persian Gulf by attacking the U.S.'s allies in the region-Kuwait and Saudi Arabia. After an attack by Iran through Iraq and missile attacks against U.S. ports of entry, the U.S.-led coalition was successful in rejecting the Iranian attack, protecting the U.S. coalition, and restoring freedom of movement through the region. By 2011, Iran had returned to pre-attack borders, but remained unreconciled to U.S. presence and occasionally initiated terrorist attacks against shipping in the Straits of Hormuz.

31. In June 2011, the U.S. began a significant military assistance effort with Ukraine. Initial assistance consisted of military equipment and the provision of limited training in the United States. Later assistance included the provisions of relatively large military assistance teams.

32. Beginning about 2012 and continuing to 2015, Polish policy reflected hostility toward Russia over incidents that occurred along their common border in an area of Belarus. Candidates in Polish elections competed for the most nationalistic position with respect to those incidents.

33. Russian-Japanese relations grew increasingly hostile regarding the Northern Territories.

34. Ukraine continued its phenomenal economic growth as a result of huge U.S. and European investment. By 2014, strong ties to the West resulted in economic development greater than economic analysts had believed possible a few years earlier.

35. By 2015, the U.S. Army was partially equipped with the Army After Next (AAN) equipment and technologies first conceived in the late 20th century.

36. Beginning about 2011 and continuing into 2015, Russian citizens began expressing extreme discontent over domestic economic and social conditions. Russian citizens compared conditions at home to relatively high standards of living in the Baltic states, Poland, and much of Ukraine. In response, leaders attempted to develop strong

nationalist fervour in Russia, blaming the large defence budget on numerous external threats.

37. In response to Russian pressures on the Baltic states, the U.S. increased its military assistance to Ukraine and Poland. Bilateral security assistance and military-to-military contact programs placed several thousand U.S. military and civilian "advisors" in each country. NATO Partnership for Peace relationships have been strengthened with Ukraine and the Baltic states, as well as with Finland and Sweden.

38. In 2013, China, taking a page from the Russians and using implied economic and military threats, attempted to bring Mongolia and Kazakhstan under its control. China also declared the waters within the "First Island Chain" to be territorial waters under the special provisions of the law of the sea treaty governing archipelagic nations. Russia and Japan, as well as the states themselves, mounted successful resistance to the attempt.

39. Long-standing hostility between India and Pakistan led to a series of conflicts early in the 21st Century. The struggle over Kashmir was the scene of repeated violence. In Pakistan, the violence in Karachi was symptomatic of societal and communal conflicts involving the various ethnic and religious groups. Pakistani leaders saw a conflict with India as useful in creating a common enemy to rally all Pakistanis. Both India and Pakistan also sought to use their nuclear status to bully the other. Each side threatened nuclear attack unless the other conceded to its demands. In 2012, India and Pakistan engaged in a short war and were maintaining an uneasy cease fire as 2015 approached. Both sides threatened to use their nuclear capabilities if hostilities resumed.

40. Almost immediately after the Second Gulf War of 2010, Iran began rebuilding its military force. Likewise, Iraq invested heavily in its military. Both countries developed to pre-war force levels and obtained better and more technologically advanced weapons systems. The U.S., concerned by further military buildup in Iran and Iraq, reaffirmed its commitment to maintain the free flow of Mid-East oil. In late 2014, Iran, evidently feeling confident that U.S. attention was focused on Europe and the Pacific, began suggesting possible moves to "regain lost territories".

41. UN population estimates indicated that the population of China would exceed 1.5 billion by 2020. As a result of its increased population and economic growth, China has been consuming energy resources at the same rate as Europe.

42. Beginning early in the decade, Russia began making overtures for incorporation of the Baltic states into Russia along the lines that had been agreed to by Belarus. These efforts were flatly rejected by all of the Baltic states. In 2012, Russia expressed concerns about discrimination against "ethnic Russians" in the Baltics and threatened possible military action unless "suitable agreement could be reached."

THE ROAD TO WAR[2]
(FOUNDATION SCENARIO)

Overview

43. The setting is the Caucasus and Central Asia in the Year 2015. China has become the world's second superpower, and has established hegemony over most of Asia except for India (neutral) and Japan (U.S. Ally). Iran and Iraq were united forcefully in 2010, and have established the New Independent Republic (NIR), an Islamic regional power which has toned down its extremist rhetoric but still has designs of the Persian Gulf oil states. NATO remains as a defensive alliance, with membership extended to the Slovak Republic, Romania, Bulgaria, Slovenia and the three Baltic Republics. Spurred by a fear of China and rejection by the West, there has been a resurgence in nationalism in Russia, which in 2012 welded together a Union called the Federation of Eurasian States (FES). The government of the FES is ultra-nationalistic and desires to establish domination over all of its ethnic kinsmen and Orthodox co-religionists. The FES includes all parts of the old Soviet Union, except for the Ukraine (neutral), the Baltic States (NATO) and oil rich Kazakhstan (Chinese ally), and three small and wealthy countries in the Caucasus, which the FES strongly desires. The FES has concentrated 18 brigades of combat power in the Caucasus region, supported by a strong air force, large Special Operations Forces and a significant information operations and space capability. Powerful naval forces have been deployed in the Black Sea and Eastern Mediterranean. In addition, the Northern Fleet has increased its readiness to deploy in the North Atlantic.

The Three Caucasian Republics

44. **Azerbaijan** (capital Baku) is an oil rich country of approximately 10 million, that has replaced the Persian Gulf as Western Europe's principal source of oil. It is a secular Islamic country with close military and cultural ties to NATO member Turkey and in the

2 The scenario used in the CDS Seminar Game was adapted from a Chief of the Land Staff seminar exercise carried out in April 1999.

past year has been accepted as an associate partner of NATO. Azerbaijan has a strong army and air force and a staunchly anti-FES Chechen minority.

45. **Armenia** (capital Yerevan) is a neutral state with strong cultural ties to the West but has an ancient enmity with Azerbaijan and Turkey. As a result, its army uses FES doctrine and equipment and a number of FES advisors are attached to its armed forces and police. Population five million, predominately Orthodox Christian but with sizeable Islamic (Azeri and Kurd) minority.

46. **Georgia** (capital Tbilisi) is a moderate pro-NATO republic, which has a small Western equipped Army and a weak air force. As its territory is the only link between Azerbaijan and Turkey and the Black Sea, Georgia has become prosperous due to the oil and gas pipelines passing through its territory. Its opposition party has strong ties to the FES and there are ethnic minorities with close cultural links to the FES (Russians and Ossetians) and to Turkey (Azeris and Chechans). Population seven million, mostly Orthodox Christian.

The Crisis of 2015

47. It is October 2015. There has been two years of increasing border tensions between Georgia, Azerbaijan and FES. After issuing an ultimatum, FES forces mass on the northern borders of Georgia and Azerbaijan. Georgia is invaded first, with FES mechanised forces moving along the Black Sea coast and air assault forces seizing airfields outside the key cities. Initially the Georgian army crumbles, but with the support of the Turkish airforce and three brigades of Turkish troops, and its Azeri minority, holds the capital Tbilisi and keeps lines of communications open with Turkey and Azerbaijan. Over 250,000 refugees flee from Georgia into North Eastern Turkey.

48. When Azeri forces are mobilised to defend their northern borders, FES forces invade Azerbaijan along the Caspian coast. The Azeri armed forces, well organised and equipped, reinforced by the two brigades of Turkish troops stationed in Azerbaijan, halt the FES invasion force along their northern border, and defeat the air assault landings, losing only the area around the city of Kuba. FES SOF operations intensify throughout Azerbaijan. Oil production is halted and many of the oil fields and pipelines are burning.

The NATO Response

49. The FES issues an ultimatum to Turkey to halt their support to the Georgians and Azeris or face "strong measures". The Turks request NATO assistance under Article 5 of the North Atlantic Charter. Azerbaijan as a NATO "partner" requests armed assistance from NATO members. The North Atlantic Council issues a warning to the FES, increases its threat condition status and calls on NATO members to contribute forces for the defence of Turkey. The U.S. president warns the FES that the U.S. will not tolerate a threat to Turkey and will not stand by while Azerbaijan is crushed. An USMC MEF, a US Army Air Mobile Division and an USAF Air Expeditionary Force are rushed to Turkey and US warships enter the Black Sea. The U.S. places another army corps and two more Air Expeditionary Forces on a high state of alert, orders the mobilisation of 200,000 reservists and begins assembling commercial shipping in East Coast ports. OPEC is asked to expand oil production to cater for the temporary loss of Azeri oil.

50. All NATO members agree to commit air, sea and logistic support forces of varying sizes. Britain, Germany, France and Italy agree to commit naval units, brigade size task forces and combat air units as part of an allied contingent. The Canadian government also agrees to commit "sizeable" forces.

Other Events

51. Worried about incorporation into the FES, the Armenian military, supported by the opposition parties and the Azeri minority, stages a coup and inserts a pro-NATO government. FES advisors are ordered to leave. The Armenians agree to allow NATO to use lines of communications through Armenia to Azerbaijan, provided no Turkish troops enter Armenian territory. They specially ask for U.S. and Canadian troops, and the Armenian communities in both countries appeal to the U.S. and Canadian governments to help guarantee the independence of Armenia. As resistance in Georgia is nearing collapse, NATO readily accepts the Armenian offer.

52. A shadowy organisation called the South Caucasus Liberation Front (SCLF) issues a warning that Canadian and U.S. military involvement in the Caucasus will be answered by "direct action" in North America. A series of mysterious explosions brings down hydro pylons and damages transformer stations in Ontario and New York. In a Vancouver shopping mall 60 people are rushed to hospital after they collapse; eight

cannot be revived. The computer systems in the Toronto and New York stock exchange crash and are down for several hours.

RED SITUATION & FORCES

53. **Political Objectives**. Assessed Federation of Eurasian States (FES) political objectives are:

a. extension of FES hegemony to include Georgia (GA), Azerbaijan (AZ) and Armenia (AR) with potential incorporation of these states within FES;

b. control of Caspian oil deposits, production, storage and pipelines; and

c. defeat of NATO "expansionism".

54. **Military Objectives**. Assessed Federation of Eurasian States (FES) military objectives are:

a. destruction of national and Turkish land, air and maritime forces within Georgia, Azerbaijan and Armenia;

b. if NATO enters conflict, destruction of NATO land, air and maritime and air forces operating in support of national and NATO military forces in Georgia, Azerbaijan and Armenia;

c. occupation of national territory of Georgia, Azerbaijan and Armenia;

d. establishment of strong defences along boundaries with Turkey and the New Independent Republic (NIR); and

e. capture of oil deposits, production, storage and pipelines before destruction.

55. **NATO Centre of Gravity**. FES assessment of NATO centre of gravities (COG):

a. strategic COG - NATO unity and commitment; and

b. operational COG - deployment/sustainment of capable combat forces into theatre.

56. **FFS Concept of Operations.**

a. **Phase 1 (D - D+7).** Attack on multiple axes with ground, air assault and amphibious forces. Initial objectives:

(1) Capture of the GA port of POTI,

(2) Capture of GA capital of TIBLISI, severing EAST-WEST ground lines of communication (GLOC) linking Georgia and Azerbaijan,

(3) Capture of AZ capital of BAKU,

(4) Destruction of national (and NATO) combat forces,

(5) Establishment of local air/maritime superiority along Georgia and Azerbaijan littorals,

(6) If NATO enters the conflict, disrupt flow of NATO ground, air and maritime assets into theatre.

b. **Phase 2 (D+8 - D+21).**

(1) Complete occupation of Georgia and Azerbaijan,

(2) Destruction of any remaining national (and NATO) combat forces within Georgia and Azerbaijan,

(3) Destruction/neutralization of national (and NATO) maritime assets operating within the Black Sea,

(4) Continued disruption of flow of NATO ground, air and maritime assets into theatre if required,

(5) Neutralization of any potential GA/AZ insurgent capability.

c. **Phase 3 (D+22 - D+30).**

(1) Unopposed occupation of Armenia,

(2) Establishment of strong defences along TURKEY-NIR borders,

(3) Gain and retain minimum of air parity over Georgia, Armenia and Azerbaijan; and

(4) Retention of maritime superiority in Georgia and Azerbaijan littorals.

57. **Assumptions.**

a. no first-use of weapons of mass destruction (WMD);

b. no restrictions on employment of FES unconventional forces (with local insurgent support) throughout theatre, including Turkey or Greece;

c. FES conventional forces will NOT enter Turkey or NIR;

d. FES will initiate asymmetric attack against NATO homelands.

58. **FES Forces**

The FES has deployed the following forces in support of its objectives:

Ground

8 x Mech Bdes
4 x Inf Bdes
4 x Atk Avn Bdes
2 x Airborne Bdes

Air

2 x Air Expeditionary Forces

Naval

Black Sea Fleet
Northern Fleet

SOF

PSYOPS (Psychological Operations)
SOF Units
Info Ops (Information Operations)

SCENARIO VARIATIONS

Variation 1

59. It is October 2015 and you are the CDS. You have received a warning that the government will commit a Canadian contingent to help defend Azerbaijan as part of a joint and combined NATO force. The Azeri and Turkish forces defending the Northern border of Azerbaijan are expected to collapse within a month.

60. The precise nature of the Canadian force is not yet defined. What do you visualise your likely tasks will be? As you consider this mission, what capabilities would appear to be of most value? Consider these in the deployment aspect, the initial defensive phase, counter moves and stability/post hostility operations.

Variation 2

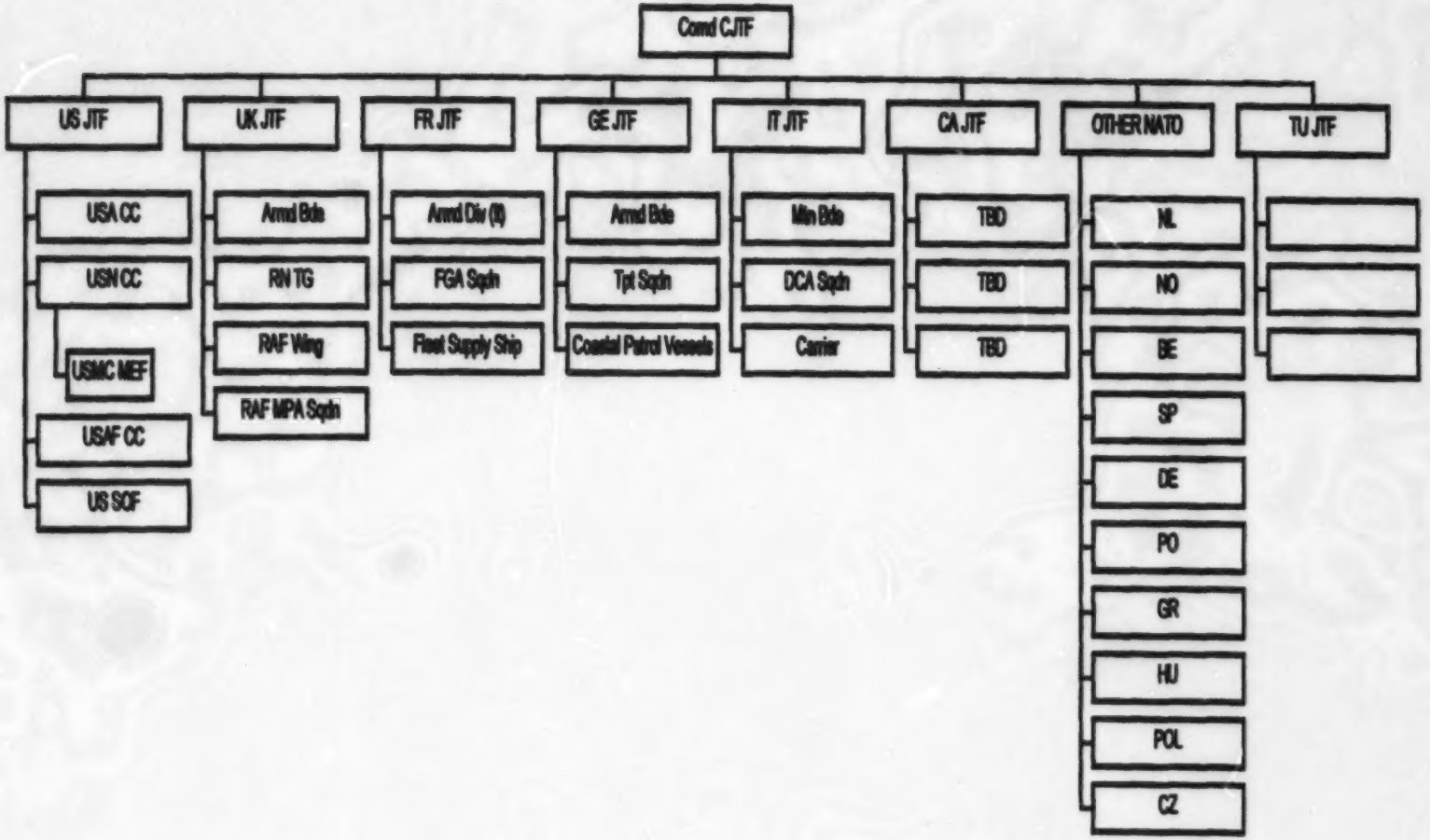
61. It is October 2015 and you are the CDS. You have received a warning that the government will commit a Canadian contingent to help ensure the integrity of Armenia as part of a joint and combined NATO force. Armenian territory serves as a critical line of communications for NATO forces in Azerbaijan. Although Armenia is at peace, a recent coup has exacerbated tensions between various ethnic groups and FES SOF are believed to be operating in the country.

62. The precise nature of the Canadian force is not yet defined. What do you visualise your likely tasks will be? As you consider this mission, what capabilities would appear to be of most value? Consider these in the deployment aspect, securing lines of communications and ensuring territorial integrity of Armenia and stability operations.

Variation 3

63. It is October 2015 and you are the CDS. You have received a warning that the government will offer humanitarian assistance including armed forces to Turkey because of an influx of 250,000 Georgian refugees on its NE border regions. At the same time, the governments of Ontario and Manitoba have requested Military Assistance to Civil Authorities after terrorist attacks against the power grid and other infrastructure, have resulted in 500,000 people being without power. On the next day the Solicitor General of British Colombia requests Aid to the Civil Power assistance to deal with consequence of a terrorist release of a small quantity of a cocktail, containing Botulum and VX toxins, in the Vancouver Millennium shopping Centre.

64. The precise nature of the Canadian force is not yet defined. What do you visualise your likely tasks will be? As you consider this mission, what capabilities would appear to be of most value?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US SOF
Armd Bde
RN TG
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Fleet Supply Ship
Armd Bde
Tpt Sqdn
Coastal Patrol Vessels
Mtn Bde
DCA Sqdn
Carrier
TBD
TBD
TBD
NL
NO
BE
SP
DE
PO
GR
HU
POL
CZ

COALITION FORCE CONTRIBUTIONS

	USA	UK	FR	GE	IT	NATO	TU(in theatre)	Other NATO
EARLY ENTRY FORCES	1xUSMC MEF	1xAir Mob Bde				STANAVFOR MED	2xArmd Div 2xMech Div 2xInf Div	
	1xUSA Air Mob Div					IRF(L)	2xAF Wng	
	1xUSAF AEF					RRF(A)	Coastal Patrol Vessels	
	1xUSN CVBG							
DECISION FORCES	1x USA corps	1xArmd Bde	1xLt Div	1xArmd Bde	1xMtn Bde			
	2xUSAF AEFs	1xRAF Wng		1xAir Tpt Sqdn	1x DCA Sqdn			
	2xUSN CVBG	1xRAF Tpt Gp (4xC-17)	1xFGA Sqdn	4xCoastal Patrol Vessels	1x AC Carrier			
	commercial shipping assembling	1xRN TG	1x Flt Supply Ship					
	200,000 reservists being mobilized	1x Flt Supply Ship						
POST-CONFLICT STABILITY FORCES	1xUSA Div	1xArmd Bde	1xInf Bde	1xAir Tpt Sqdn	1xMtn Bde	STANAVFOR MED		1xComp Inf Div
	1xUSAF AEF							Engr Support
	1xUSN CVBG							Logistics
	CIMIC							Transport
	Engr & Spt							Coastal Patrol Vessels
								Civil Affairs
								Medical

DEPLOYMENT TIME LINES

Foundation Scenario

65. One year strategic warning has been received of the possibility of hostilities in the Caucasus region. A Warning is issued on 1 Oct 2015 to prepare for possible Canadian contribution to force to deploy to Caucasus in support of NATO.

Scenario Variation 1 (Warfighting) Deployment Targets

Phase 1 – Early Entry Ops
- halt phase
- 21 days

Phase 2 – Decision Ops
- follow-on forces (heavy roll-back forces)
- 90 days

Phase 3 – Post Conflict Stability Ops
- medium forces
- 120 days & beyond

Scenario Variation 2 (PKO/PSO) Deployment Targets

Phase 1 – Vanguard
- early presence force – signal intent & resolve
- 21 days

Phase 2 – Main Force
- less than 90 days

Phase 3 – Rotation Force
- 6 mos

Phase 4 – Long-term Stability Force
- 3 additional rotations @ 12, 18 & 24 mos

Scenario Variation 3 (Overseas Humanitarian Ops & Domestic Ops / Counter Terrorism / Consequence Management/Mitigation) Deployment Targets

- Counter Terrorism (CT) Forces
  - immediate (less than 4 hrs to move)

- Military Assistance to Civil Authorities Forces
  - less than 7 days

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The Director of Defence Analysis (DDA) was approached by the Chief of Staff Strategic Planning (COS Strat P) of the Director General Strategic Planning (DGSP) Division to develop a strategic level game for the 1999 Chief of Defence Staff (CDS) Single Issue Seminar. This report documents the development and execution of the game, discusses some initial impressions and concludes with some preliminary discussion on the potential value of such strategic level gaming to inform future force development within the Canadian Forces.

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